

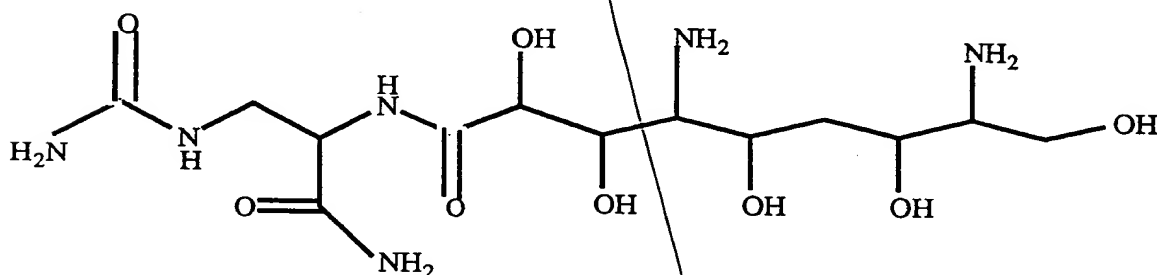
WHAT IS CLAIMED IS

1. A mutant of a *Bacillus* strain which produces a factor which potentiates the pesticidal activity of a *Bacillus* related pesticide, wherein the amount of the factor produced by the mutant is greater than the amount of the factor produced by a corresponding parental strain, wherein said *Bacillus* strain is selected from the group consisting of *Bacillus licheniformis*, *Bacillus subtilus*, and *Bacillus thuringiensis*.

2. The mutant according to claim 1, wherein the mutant produces at least about 2 times more factor than the corresponding parental strain.

3. The mutant according to claim 1, wherein the factor has ¹H NMR shifts at about δ 1.5, 3.22, 3.29, 3.35, 3.43, 3.58, 3.73, 3.98, 4.07, 4.15, 4.25, and 4.35, and ¹³C shifts at about 31.6, 37.2, 51.1, 53.3, 54.0, 54.4, 61.5, 61.6, 64.1, 65.6, 158.3, 170.7, and 171.3.

4. The mutant according to claim 1, wherein the factor has the structure I or salt thereof



5. The mutant according to claim 1, wherein the *Bacillus* strain is a *Bacillus thuringiensis* strain.

6. The mutant according to claim 5, wherein the *Bacillus thuringiensis* strain is selected from the group consisting of strains of *Bacillus thuringiensis* subsp. *aizawai*, *Bacillus thuringiensis* subsp. *alesti*, *Bacillus thuringiensis* subsp. *canadiensis*, *Bacillus thuringiensis* subsp. *colmeri*,
5 *Bacillus thuringiensis* subsp. *coreanensis*, *Bacillus thuringiensis* subsp. *dakota*, *Bacillus thuringiensis* subsp. *darmstadiensis*, *Bacillus thuringiensis* subsp. *dendrolimus*, *Bacillus thuringiensis* subsp. *entomocidus*, *Bacillus*
10 *thuringiensis* subsp. *finitimus*, *Bacillus thuringiensis* subsp. *galleriae*, *Bacillus thuringiensis* subsp. *indiana*, *Bacillus thuringiensis* subsp. *israelensis*, *Bacillus thuringiensis* subsp. *kenyae*, *Bacillus thuringiensis* subsp. *kumamotoensis*, *Bacillus thuringiensis* subsp. *kurstaki*, *Bacillus thuringiensis* subsp.
15 *kyushuensis*, *Bacillus thuringiensis* subsp. *japonensis*, *Bacillus thuringiensis* subsp. *mexcanensis*, *Bacillus thuringiensis* subsp. *morrisoni*, *Bacillus thuringiensis* subsp. *neoleonensis*, *Bacillus thuringiensis* subsp. *nigeriae*, *Bacillus thuringiensis* subsp. *ostrinae*, *Bacillus thuringiensis* subsp. *pakistani*, *Bacillus*
20 *thuringiensis* subsp. *pondicheriensis*, *Bacillus thuringiensis* subsp. *shandongensis*, *Bacillus thuringiensis* subsp. *silo*, *Bacillus thuringiensis* subsp. *sotto*, *Bacillus thuringiensis* subsp. *subtoxicus*, *Bacillus thuringiensis* subsp. *tenebrionis*, *Bacillus thuringiensis* subsp. *thompsoni*, *Bacillus thuringiensis* subsp. *tochigiensis*, *Bacillus thuringiensis* subsp. *tohokuensis*,
25 *Bacillus thuringiensis* subsp. *tolworthi*, *Bacillus thuringiensis* subsp. *toumanoffi*, *Bacillus thuringiensis* subsp. *wuhanensis*, and *Bacillus thuringiensis* subsp. *yunnanensis*.

30 7. The mutant according to claim 5, wherein the *Bacillus thuringiensis* strain is a *Bacillus thuringiensis* subsp. *kurstaki* strain.

35 8. The mutant according to claim 1, wherein the mutant has the identifying characteristics of EMCC0129, deposited with the NRRL, having an accession number of NRRL B-www; or has the identifying characteristics of EMCC0130,

deposited with the NRRL, having an accession number of NRRL B-xxxx.

5 9. The mutant according to claim 1, wherein the *Bacillus* related pesticide comprises a *Bacillus thuringiensis* delta-endotoxin or a pesticidally-active fragment thereof.

10 10. The mutant according to claim 9, wherein the *Bacillus thuringiensis* delta-endotoxin or the pesticidally-active fragment thereof is selected from the group consisting of CryI, CryII, CryIII, CryIV, CryV, and CryVI.

15 11. The mutant according to claim 10, wherein the *Bacillus thuringiensis* delta-endotoxin or the pesticidally-active fragment thereof is a CryIA delta-endotoxin or a pesticidally-active fragment thereof.

20 12. The mutant according to claim 10, wherein the *Bacillus thuringiensis* delta-endotoxin or the pesticidally-active fragment thereof is a CryIC delta-endotoxin or a pesticidally-active fragment thereof.

25 13. The mutant according to claim 1, wherein the *Bacillus* related pesticide comprises a *Bacillus thuringiensis* spore.

14. The mutant according to claim 1, wherein the factor is obtained by

- 30 (a) culturing the mutant of the *Bacillus* strain under suitable conditions;
- (b) recovering a supernatant of the culture of the mutant of step (a); and
- (c) isolating the factor from the supernatant of step (b).

35 15. The mutant according to claim 14, wherein the factor is obtained from the supernatant of the culture of a *Bacillus thuringiensis* strain.

16. A method for obtaining the mutant of claim 1 comprising

- (a) treating a *Bacillus* strain with a mutagen;
- 5 (b) growing the mutated *Bacillus* strain of step (a) under suitable conditions for selecting the mutant; and
- (c) selecting the mutant of step (b).

17. A mutant of a *Bacillus* strain obtained according
10 to the method of claim 16.

Add A6, A7, A8,
A9, A10, A11

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